NECTA states that SNET's HFC costing methodologies presented in this proceeding are inconsistent with the Department's long-standing directives in Docket No. 95-03-01 and Docket No. 95-06-17. Specifically, NECTA objects to the use of SNET's HFC direct cost assignment methodology, previously rejected by the Department. NECTA states that once again, SNET's direct assignments, joint plant classifications and allocations of joint HFC investment between broadband and telephone services do not reflect the principles of cost causation, capacity utilization or derived benefit. According to NECTA, SNET's unchanged approach does not remove the undue burden of the HFC deployment upon telephone ratepayers which the Department directed the Company to eliminate through the application of proper costing methodologies. NECTA claims that SNET's approach overstates the cost basis for its proposed unbundled loop rates and its regulated revenue requirements. NECTA opines that as a result, SNET's HFC cost assignments and allocations are contrary to law and the public interest in the following respects:

1. The excessive attribution of local loop costs to telephony for pricing purposes will lead to an overstatement of unbundled loop costs, access service costs and universal service funding requirements; this problem will become more severe as the HFC deployment replaces an ever larger percentage of existing plant and if SNET experiences cost overruns;

2. Once the current freeze on certain residential service rates expires on January 1, 1998, pursuant to SNET's alternative plan of regulation, and in the midst of SNET's HFC deployment, residential service rates will be burdened by excessive HFC-based local loop costs;

3. SNET will continue to cross subsidize its Personal Vision affiliate's entry into the unregulated cable services business, contrary to Conn. Gen. Stat. § 16-247b and §254(k) of the 1996 Federal Act;

4. The Department's monitoring of SNET's regulated earnings, as required by Conn. Gen. Stat. §16-247k, will be compromised; and

5. The understatement of SNET's regulated earnings results in its carrying an excessive reserve deficiency balance and assures that it will avoid cumulative excess earnings that should be shared with telephone ratepayers.

NECTA Brief, pp. 6-9, 14.

As a means of addressing SNET's HFC direct assignment and joint cost allocation methodologies' issues and ensure that telephone ratepayers are not forced to cross-subsidize HFC-related deployment costs, NECTA recommends the Department order SNET to conduct the cost analyses recommended by its witness Dr. Johnson. In particular, NECTA recommends the Department adopt measures to assure that more than 50% of total HFC network investment and recurring expenses (direct plus common) be assigned and allocated to SNET's broadband services. NECTA maintains that if adopted, its recommendation would result in a percentage of HFC costs being placed upon broadband on an interim basis and would afford an additional measure of protection to telephone ratepayers and provide SNET with the incentive to conduct appropriate cost studies in an expeditious manner.

In the event that the Department does not order SNET to prepare its cost studies in the above manner, NECTA recommends the Department adopt an alternative cost recovery method applied to the Beacon Initiative by the Canadian Radio-television and Telecommunications Commission (CRTC). NECTA states that under this approach, local broadband facilities are assigned entirely to a competitive segment, with a portion transferred for telephone use in the utility segment on an as-needed basis at tariffed transfer prices based on incremental cost. NECTA claims that the CRTC approach would be simple to administer and would afford immediate and substantial protection against excessive telephone rates due to cross-subsidization.

As a third suggestion, NECTA recommends the Department order SNET to modify its HFC costing methodologies. According to NECTA, SNET's assignment of optical node and amplifier investments and related expenses should be modified in order to account for the causal connection between the numbers of optical nodes and amplifiers installed an the provision of broadband services over the HFC platform. NECTA claims that SNET's assignment of fiber investment and related expenses, based on its attribution of functions to six fibers, and its assignment of associated electronics is arbitrary and must be modified. Therefore, NECTA recommends that the spare fiber be allocated consistent with the manner in which joint costs are allocated.

NECTA claims that SNET's joint classification of HFC-based network interface devices (NIDs) and drop cable, (necessitated by the SNET's plans to offer video) is also unreasonable. NECTA maintains that since existing service drops and NIDs are adequate for telephony services, the cost of the new NIDs and drop cable should be assigned primarily to broadband under cost causation principles. NECTA maintains that these adjustments would help conform SNET's HFC assignment and allocation methodology to past directives, (i.e., Public Act 94-83 and the Federal Telcom Act). NECTA Brief, pp. 9-12, 27-41.

NECTA further recommends the Department direct SNET to charge a portion of its Bellcore outside services' expenses to the broadband service category. NECTA states that SNET has spent millions of dollars on broadband-related outside services, which have been fully expensed and charged to its regulated operations. NECTA argues that the telephone company has not charged and does not intend to charge, any of these costs to its Personal Vision (PV) affiliate or its shareholders in the absence of an order from the Department.

Additionally, NECTA recommends the Department find that SNET's Shared Services Agreement between the telephone company and PV is unfair to telephone ratepayers because it is based on SNET's flawed HFC direct assignments and joint cost allocations and does not recover all relevant broadband costs. NECTA also recommends that SNET be directed to treat a portion of its depreciation reserve deficiency as broadband-related and allocate a portion of its "above-the-line" reserve deficiency amortization to PV. Lastly, NECTA recommends the Department mandate annual audits of SNET's HFC cost assignments and allocations during the term of the its alternative regulation plan. Johnson Testimony, pp. 2-27; NECTA Brief, pp. 12 and 13, 41-47; NECTA Reply Brief, pp. 3-14.

V. DEPARTMENT ANALYSIS

A. STATUTORY FRAMEWORK

The principal purpose of this proceeding is to establish rates to be charged by SNET for acquisition and use of unbundled network service elements and network feature enhancements for the purpose of repackaging, rebranding or reselling such services or features in direct competition with SNET. In determining such rates, the Department is bound by the mandates of Conn. Gen. Stat. § 16-247b which provides:

> (a) On petition or its own motion, the department shall initiate a proceeding to unbundle the noncompetitive and emerging competitive functions of a telecommunications company's local telecommunications network that are used to provide telecommunications services and which the department determines, after notice and hearing, are reasonably capable of being tariffed and offered as separate services. Such unbundled functions shall be offered under tariff at rates, terms and conditions that do not unreasonably discriminate among actual and potential users and actual and potential providers of such local network services.
>
> (b) Each telephone company shall provide reasonable nondiscriminatory access to all equipment, facilities and services necessary to provide telecommunications services to customers. The department shall determine the rates that a telephone company charges for equipment, facilities and services which are necessary for the provision of telecommunications services. The rate that a telephone company charges for a competitive or emerging competitive telecommunications service shall not be less than the sum of (1) the rate charged to another telecommunications company for a noncompetitive or emerging competitive local network service function used by that company to provide a competing telecommunications service and (2) the applicable incremental costs of the telephone company.
>
> (c) A telephone company shall not use the revenues, expenses, costs, assets liabilities or other resources derived from or associated with providing a noncompetitive service to subsidize its provision of competitive, emerging competitive or unregulated telecommunications services.

Conn. Gen. Stat. § 16-247b.

Additionally, the 1996 Federal Act requires that rates for the interconnection of facilities and equipment and network elements:

(A) shall be--

(i) based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element (whichever is applicable), and

(ii)nondiscriminatory, and

(B) may include a reasonable profit.

1996 Federal Act, §251(d)(1).

Unbundled loops, ports, multiplexing and interwire center transport support are noncompetitive functions of SNET's local telecommunications network that are used to provide telecommunications services and are reasonably capable of being tariffed and offered as separate services. Therefore, under provisions of Conn. Gen. Stat. § 16-247b and §251(d)(1) of the 1996 Federal Act, the Department must establish nondiscriminatory and compensatory rates and charges for such services. Previous Department Decisions require SNET to offer for resale an equivalent basic local service offering as well as the discrete network service elements deemed necessary to interconnect facilities-based networks of competitors to SNET's customers. The purpose of this proceeding is to examine SNET's proposal to offer unbundled loops, ports, multiplexing and interwire center transport. As discussed in greater detail below, SNET's proposal to price these unbundled network elements comports with State and Federal standards.

B. SNET PROPOSAL

SNET requests the Department's approval to offer unbundled loops, ports and associated interconnection arrangements. SNET submitted revised TSLRIC studies on April 29, 1996. Based on these studies, SNET filed proposed rates for unbundled elements and services on July 8, 1996. SNET also requests the Department's approval of these rates.

SNET claims that, as required by Section 251(c)(3) of the 1996 Federal Act, its proposed network elements are available on an unbundled basis at just, reasonable, and nondiscriminatory rates, terms, and conditions. The proposed rates are based on TSLRIC plus a contribution to SNET's joint and common costs which SNET argues is reasonable. SNET asserts that the efficient prices for services are those that contain a markup over incremental costs that (1) recovers the revenue to which the firm is entitled; (2) distorts demand the least across the markets in which the firm competes; and (3) preserves competitive parity so that no firm is advantaged or disadvantaged because it supplies facilities that its competitors require to compete for customers in the retail markets. SNET believes the proposed tariffs provide CLECs with the ability to offer a full range of products and services to their Connecticut customers. Moreover, SNET states that its proposal provides CLECs the opportunity to enter the market quickly and to compete effectively in the Connecticut local exchange market. MacClintock Testimony, p.4; Taylor Testimony, p. 18.

The Department concluded in its December 20, 1995 Decision in Docket 95-06-17 that SNET's cost of service studies contained substantive deficiencies and errors. SNET was ordered to correct the problems identified by the Department and resubmit revised cost studies. SNET claims that the updated TSLRIC studies filed on April 29, 1996 and the July 23, 1996 supplement, conform to the Department's requirements.

In prior proceedings SNET has presented its proposed technology modernization and enhancement strategy called I-SNET. The central elements of I-SNET are digital switching and transmission technologies supported by a broad-band, HFC distribution fabric eventually covering all of the SNET service area. SNET claims that use of the latest digital transmission technologies in combination with a broadband HFC distribution network will allow many information, entertainment and communications services to be made available to the public.

Eventually, SNET expects that the HFC network will entirely replace the existing copper plant. In conducting the cost studies presented in this proceeding, SNET has allocated HFC costs to one of three categories: broadband, telephony, or joint costs, based upon function. SNET also proposes to assign 50% of the common and joint costs of HFC to telephony service and 50% to cable service.

SNET states that after direct assignment has been made on the basis of cost causation, any allocation of joint costs is arbitrary. SNET argues that a service that recovers the additional expenses directly attributable to the provision of that service does not receive a subsidy. The argument presented is that as long as incremental revenue equals or exceeds incremental cost, pricing for the service in question is fairly allocated, across both customers and competitors. Thus, SNET claims its decision to supply the service will not unjustly treat customers of any other service or any competitor. SNET concludes that its allocation of 50% of the costs of HFC to each of telephony and cable is reasonable and equitable.

SNET has revised its TSLRIC studies and assigned each service element all of the costs it generates on a per unit basis. While SNET's investment inputs have not changed, the per unit output has, resulting in the treatment of these costs as variable. SNET has also presented the per unit costs for each service element including access support. Previously, SNET allocated the access support costs on a fixed basis, but now presents these costs on a per unit basis. SNET claims the aggregate costs for access services remain the same as in the original cost studies, despite this modification.

SNET's revised cost studies have excluded capacity cost calculations. Unit investment costs have not been calculated using the capacity cost method nor has its incremental switching costs. SNET used the Bellcore Switching Cost Information System (SCIS) to determine the incremental cost of switched services. According to SNET, the model's option for using a capacity cost method to measure long run incremental switching costs was not chosen in this case. Finally, relative to loop costs, unit investment costs have been calculated using the long run expected utilization rate, which indicates that the capacity cost method was also not used.

The depreciation methods SNET has used in its revised cost studies are consistent with those mandated by the Department in its Decision in Docket No. 94-10-03. SNET has used the prescribed composite rate of 8.0% as well as the Department's prescribed lives. Additionally, the depreciation lives used in its incremental cost model, MICRA, are the same as those prescribed by the Department. Tr. 2/24/97, p. 1510.

Further, SNET states that its DLC investment costs in its revised cost study are 7 to 24% lower than those from the previously submitted cost study for all four geographic areas (rural, suburban, urban and metro).

SNET has also conducted a study that identifies the separate costs of connection and disconnection for all relevant services, including unbundled loops. SNET states that its cost studies account for the cost savings achieved from bulk provisioning.[15] SNET asserts that it is has identified the costs of connecting multiple loops during one transaction by distinguishing between initial and additional costs. SNET opines that the previously submitted cost study considered only the per loop cost for connection and disconnection, but did not account for the cost savings achieved when multiple loops were connected and disconnected during one customer transaction. SNET claims that as a result of this modification, the costs for additional unbundled elements are as much as 22% lower for connections and 45% lower for disconnections.

Lastly, SNET has separately identified pole attachment costs. SNET identified annual pole attachment cost per home passed, and then the proportionate share of the cost associated with attaching fiber cable and attaching coaxial cable were calculated. SNET claims that the coaxial related costs were allocated on a 50/50 basis to video and telephone, while the fiber-related costs have been based on the functional use of fiber in the fiber cable. Taylor Testimony, pp. 11-17.

C. COST STUDIES

1. Studies Submitted

a. SNET's Cost Study

The Department found in its December 20, 1995 Decision in Docket 95-06-17 that SNET's TSLRIC studies contained substantive deficiencies. That Decision ordered SNET to correct those problems and resubmit revised cost studies. SNET claims that the updated TSLRIC studies submitted on April 29, 1996, supplemented on July 23, 1996, comply with the Decision's order. The Department finds that SNET has corrected most of the deficiencies, but not all.

For example, SNET's revised TSLRIC studies assign each service element the total costs each element generates on a per unit basis. While SNET's investment inputs have not been changed, the per unit output has. SNET's filing presents the per unit costs for each service element including access support. In addition, SNET's revised cost studies exclude capacity cost calculations. SNET did not calculate unit investment costs using the capacity cost method, nor were they used to calculate SNET's incremental switching costs. SNET used Bellcore's SCIS to determine the incremental cost of switched services while not using the model's option for using a capacity cost method to measure long run incremental switching costs in this case. Finally, relative to loop costs, SNET states that unit investment costs have been

[15] Bulk provisioning, in this case, refers to the connection and disconnection costs associated with providing unbundled elements to CLECs.

calculated using the long run expected utilization rate. Again, the capacity cost method was not used.

SNET stated that it revised its cost studies to account for the jurisdictional split of non-traffic sensitive loop costs. Originally SNET allocated 25% of the loop costs to the interstate jurisdiction and 75% to intrastate. However, as part of SNET's January 24, 1997, rebuttal filing, it revised its rates to include 100% of the loop costs. SNET states that it will no longer be permitted to charge the subscriber line charge for unbundled loops due to a FCC ruling. Tr. 2/3/97, pp. 249-253. For unbundled loop rates, the costs include 100% of the cost. Tr. 2/3/97, pp. 56, 66, and Tr. 2/5/97, pp. 742-743. The Department accepts this approach. Once the loop is leased by another carrier, it becomes that carriers' responsibility to allocate a portion of its costs to interstate services and the remainder to intrastate services. The allocation of loop costs is related to the provider of loop service to the consumer and the use of the service by consumers. CLECs will be providing both intrastate and interstate services, with the loops being used for both purposes. CLECs will be required to develop interstate access charges similar to the manner in which SNET and other LECs must develop for access to their facilities. Similarly, the CLECs will also be required to allocate loop costs to those services that use the loop (e.g., 75% to intrastate and 25% to interstate).

SNET has conducted a study that identifies the separate costs of service connection and disconnection and determined the costs for all the relevant services, including unbundled loops. SNET claims that its cost studies account for the cost savings achieved from bulk provisioning. SNET asserts that it has identified the costs of connecting multiple loops during one transaction by distinguishing between initial and additional costs. The cost study previously submitted in Docket No. 95-06-17 considered only the per loop cost for connection and disconnection but did not account for the cost savings achieved when multiple loops are connected and disconnected during one customer transactions. SNET claims that as a result of this modification, the costs for additional unbundled elements are as much as 22% lower for connections and 45% lower for disconnections. The purpose of separating service connection costs from service disconnection costs was to develop separate rates and impose these rates as service is either connected or disconnected. While SNET has separated its connection and disconnection costs as discussed in greater detail below, the Department finds that they are still overstated. Additionally, SNET appears to have not been very conservative in its estimates for nonrecurring costs. Specifically, SNET has erred by imposing charges for costs that may or may not be incurred. SNET's nonrecurring cost study appears to be designed to stop competition rather than encourage it. The Department believes that SNET's nonrecurring costs are unacceptable for this proceeding. The Department has attempted to correct these costs based on record evidence and developed rates. However, the Department finds the rates proposed by SNET in its Brief (Attachment 2) are acceptable. Nevertheless, the Department disagrees with that aspect of SNET's proposal that they apply only to Simple 2-wire loops. The Department will require that this charge apply to all unbundled loops. The Department also finds that SNET has not accurately reflected all the expected cost savings from bulk provisioning. As such, the rates that are established here will be examined again when SNET gains more experience.

SNET has further investigated DLC costs and in its revised cost study concluded that they are lower than those from its previous cost study. There were discussions during the hearings that DLC could be deployed more extensively to further lower costs. Tr. 2/4/97, pp. 403-406. The Department concludes that further deployment is a management decision and not a Department decision. The Department finds that SNET has provided a reasonable analysis of DLC's use and deployment, and will not require further action at this time.

Relative to SNET's cost study documentation, the Department finds that SNET has provided sufficient documentation. SNET has provided documentation that shows all parties how the studies fit together. Additionally, the parties have been supplied proprietary documentation that is sufficient to understand SNET's studies.

Finally, SNET stated that it has separately identified pole attachment costs. In the December 20, 1995 Decision in Docket 95-06-17 at page 82, the Department stated that "[i]nclusion of such costs in future cost studies will not be permitted by the Department." The Department has ordered SNET to exclude imputed pole attachment charges. While SNET has again imputed the pole attachment charges explaining that it is permitted to do so by the 1996 Federal Act, the Department can find no such justification. Section 224(g) of the 1996 Federal Act requires SNET to "charge any affiliate, subsidiary or associate company" for pole attachments. In the Department's opinion, the proper method of recovering pole attachment costs is to include these costs in their development and not by imputing pole attachment charges into rates for loops purchased by CLECs. Accordingly, SNET will be directed below to revise its rates (along with the other changes identified herein) by removing the imputed pole attachment charges. If and when an affiliate, subsidiary or associated company uses SNET's telephone poles, it shall impute the pole attachment charge to that affiliate company.

The parties to this proceeding have also examined and critiqued SNET's cost studies in greater detail than those areas discussed above. MCI stated that SNET's studies were deficient in that:

1. SNET failed to consider all available technology.
2. SNET's studies were not truly long run.
3. The costs included in the studies subsidize SNET's expansion into the broadband marketplace.
4. SNET's studies are not auditable.

The Department disagrees with these contentions. Specifically, MCI's contention that SNET failed to consider all available technology is based on the methodology utilized by the Hatfield Model, the cost study model employed by MCI's witness. MCI claims that the Hatfield Model provides a reasonable estimate of the costs that would be incurred by an efficient firm in the provision of unbundled network function and basic exchange service. As discussed below, the Department finds that the Hatfield Model does not provide a reasonable estimate of SNET's unbundled loop costs. SNET has identified the cost of the technology mix it will use in providing service. The Department finds that the Hatfield Model's study of a different technology, using generic, non-

Connecticut-specific cost models, is not particularly useful in establishing rates for SNET's service.

MCI claimed that SNET's studies were not truly long run because they only spanned a forward going five year period. Rather, MCI argues that these studies should be sufficiently long run so as to assume the technology would be deployed everywhere. This position is juxtaposed to the OCC who implied that SNET's cost studies were invalid because they were not forward looking. OCC Brief, pp. 8 and 9. The Department finds that both claims are without merit. SNET's planning horizon is reasonable (and longer than the planning horizon proposed by OCC) and of sufficient length for rate making or competitive business planning. The primary consideration in a long run cost study is treating all costs as variable. SNET has done a reasonable job of examining variable costs, although it needs to continue its analysis of these costs. The objective of long run analysis is not the developing of costs for hypothetical systems serving hypothetical customers, as suggested by both MCI and OCC. If rates were put in place today for a system that would be fully deployed in ten years, the difference in costs would have to still be recovered. Obviously, the CLECs do not want to recover in their service rates the difference between what is and what will be. Today's costs are real costs and should be recovered by those using the network. If CLEC rates were set to recover the distant future's least cost network, they would have no incentive today to develop their own network.

While AT&T did not submit a separate cost study it did identify several additional problems with SNET's study. AT&T argued that SNET did not use an appropriate Return on Investment (ROE) in its TSLRIC cost studies. Specifically, AT&T opposes SNET's use of a 12.25% ROE as opposed to the 11.9% ROE. Tr. 2/3/97, p. 161 and the Decision in Docket No. 95-03-01 at p. 135. Based on the Decision in Docket No. 94-10-01, the Department is unaware of any requirement for SNET to use the ROE awarded in its most recent rate proceeding. Furthermore, the Department is at a loss in rationalizing that methodology in a case where a company is subject to price cap as opposed to rate base regulation.

b. LECOM

The OCC provided its own TSLRIC and TELRIC studies for providing unbundled loops. OCC maintains that its cost studies indicate that SNET has over estimated the cost of providing service and unbundled network elements in metropolitan and urban areas and has underestimated the cost in rural and suburban markets.

OCC estimated TSLRIC of unbundled loops and ports for Urban, Rural, Suburban and Metropolitan model offices in SNET's service territory using LECOM. OCC claims the study is forward-looking and reflects the costs that SNET would incur using a copper/fiber architecture. OCC contends that this method is appropriate because copper/fiber is the most efficient telecommunications technology currently available. OCC states that it has not estimated the cost of using an HFC network because there is so much uncertainty concerning the cost of this technology. OCC asserts that the LECOM estimates provide a ceiling for the expenditure of providing loops and ports. OCC also argues its cost model is preferred to SNET's because it identifies both the total service incremental cost and the average cost of production.

OCC claims that it is not clear that SNET's study identifies total service long-run incremental costs and those costs identified as incremental costs because they are often average marginal values which may not even be calculated correctly. OCC also claims that if cost savings are achieved through SNET's use of HFC, then its cost estimates of providing voice service on an HFC network should be less than the costs identified by LECOM. Thus, OCC asserts, LECOM provides an upper boundary for the cost of providing voice service.

The Department concludes that OCC has no evidence to support its claim that the costs associated with SNET's copper/fiber network are less than those incurred with an HFC network. The Department finds many of the same problems that exist in the Hatfield Model, (discussed below), apply to LECOM, making the use of this study unacceptable. For example, LECOM does not reflect SNET's actual costs related to how SNET is growing its network; rather, LECOM reflects how OCC witness, Dr. Gabel, believes the network should be designed. LECOM also assumes the scorched node philosophy which has little application to a network already in place. LECOM looks at current demand and increases it by two-and-a-half years as opposed to SNET's five year forecast. Tr. 2/5/97, pp. 817 and 818. The Department believes that any changes in SNET's network over the next two years, attributable to deployment of a copper/fiber mix, are most likely zero. The Department finds OCC's short-run view using long-run costs is not useful. Although LECOM, like the Hatfield Model, is useful in modeling a least cost network given an almost clean slate, it is not useful in establishing rates for SNET.

c. Hatfield Model

MCI presented the Hatfield Model as a means of estimating SNET's costs. The Department fails to see the purpose of presenting this model since MCI's witness could not justify the assumptions used in the model, audit the model or propose alternative prices based on the model's results. Tr. 2/5/96, pp. 923, 935 and 936, 946. The Department has analyzed the Hatfield Model and finds that it cannot accept the model because SNET presented an acceptable Connecticut-specific study to set rates. Furthermore, when setting service rates, all assumptions must be Connecticut-specific and specific to SNET. In the case of the Hatfield Model, they are not. Analysis of costs that exist in other areas of the country is not useful in Connecticut. Hypothetical least costs, that is, costs unrelated to how SNET is developing its network, or costs from other jurisdictions or companies, have no meaning in Connecticut. The purpose of this proceeding is to approve rates for SNET's services based on its costs, and not those that may not exist and are not expected to exist in Connecticut. If competitors, like MCI or AT&T, believe that SNET is developing the wrong network, and that another network can be developed at a lower cost, then these companies should construct it themselves. That is exactly what competition was introduced to do. Competition provides incentives to lower costs and be more efficient, not to use the legal process to artificially obtain these results. The Hatfield Model strains credibility in its approach and in the purpose to which MCI has suggested the Department use the model. The Hatfield Model also attempts to forecast the most efficient long run cost of providing unbundled elements in a competitive market, yet assumes embedded depreciation rates and capital costs which have been set to reflect today's environment, absent the presence of effective or workable competition. SNET continues to retain the majority of the market and the Department expects that its depreciation rates and capital costs in a competitive market will be higher. See for example, Tr. 2/24/97, p. 1357 and Taylor Rebuttal, p. 16. The Department notes that SNET's existing depreciation rates are several years old and lower than those that would most likely be established today. Tr. 2/24/97, p. 1510. In this competitive environment, capital costs are also likely to increase as the competitive risk to SNET's business increases. No one can seriously doubt that SNET faces additional risk in the next five years, when compared to the last five years. Substituting competitive depreciation expenses, and capital costs reflecting higher risk, as would be done in the Hatfield Model, would increase these costs. Additionally, the Hatfield Model assumes the "scorched node" philosophy (i.e., a hypothetical network where all components change except the location of SNET's central offices). Although this may be useful in projecting a hypothetical cost for new competitors coming into SNET's market who may install facilities, this approach does not reflect how SNET is currently operating or growing its network. In light of the above, the Department finds the Hatfield Model unacceptable for establishing rates for SNET's unbundled elements.

d. Appropriate Cost Study

The Department has formally addressed the appropriate cost study methodology, in Docket No. 94-10-01. As recently as the June 15, 1995 Decision in that docket, the Department determined that SNET's TSLRIC methodology provided valid, usable costs. None of the arguments presented by the parties and intervenors in this proceeding have persuaded the Department that a departure from previous cost of service Decisions was necessary. Indeed, in some instances, the arguments opposing SNET's studies appear to provide the inverse effect. For example, MCI's contention that SNET's five year study period is not long enough does not support itself. The Department is well aware that SNET's construction plans do not provide for the completion of the HFC network in the next five years. However, the Department questions how long SNET's rates will be in effect and whether five years from now the rates and charges will be necessary at all. The Department is confident that at least one rate change will be necessary during that time period, at which time new cost studies will be required. Accordingly, the Department accepts five years as an appropriate study period for the purposes of this proceeding.

The Parties proposing alternate cost studies purport that they are "tailored" to SNET's network. At the same time these proponents contend that the HFC network is too costly and should not be implemented. Accordingly, both OCC and MCI through the LECOM and Hatfield Models respectively, have developed costs based on networks that are technologically dissimilar to SNET's. These studies may very well produce costs far below SNET's, but due to the fact that they are based on a differently constructed network than SNET's. This approach is analogous to costing Greyhound Bus service using investments in large sedans. A correct methodology will produce less costs but may not be valid. Accordingly, the Department hereby rejects the study results of LECOM and the Hatfield Model for purposes of this proceeding.

2. Network Basis of Cost Studies Submitted

In reference to the use of HFC, OCC states that given the untested nature of this technology, it is difficult to verify the reasonableness of the Company's reported costs. Gabel Prefiled Testimony, p. 43. The reasonableness of the technology has already passed the test; as the Department has determined that HFC has benefits to both telephony and video customers. The real question however, which was largely unaddressed by the parties and SNET, was how to allocate HFC's costs. No party presented an analysis of the capacity of the six fibers and whether capacity should be used as the Department suggested in the December 20, 1995 Decision in Docket No. 95-06-17.

MCI states that by including the HFC network costs, the CLECs would subsidize SNET's expansion into the broadband marketplace and OCC concurred. The Department is concerned with this issue; however, it sees nothing inherently unreasonable with SNET's approach to its network development and costing. The Department will continue to further examine these costs as SNET's development of its HFC network proceeds, with the purpose of insuring that telephony customers do not subsidize video. The Department has no evidence of subsidy today.

MCI also stated that the deployment of HFC technology is gold plating the network. Tr. 2/5/97, p. 912. According to MCI, gold plated networks were common under rate base regulation, wherein companies over invested in their plants to recover lucrative rates of return granted by regulating authorities. This Department has never sanctioned gold plating in the past and has no intention of doing so in the future. MCI's claim is without merit and lacks any evidence. While OCC indicated that much more is known about the cost of using fiber and copper in the loop, OCC did not suggest that the network shouldn't be deployed. The reality is that the HFC network is being deployed. Therefore, the time for the debate regarding the appropriateness of the HFC network is over. The Department continues to believe that HFC is a valid telephony technology. It would be ludicrous on the Department's part to require the exclusion of HFC costs in a proceeding of this nature.

The Department stated that it would address the allocation of video allocations in this proceeding. The Department has been presented with two basic allocations for common and joint costs; a 50/50 split between telephony and video, proposed by SNET, and 100% allocation to video implicit in the parties' presentations. Alternatively, the Department could require SNET to conduct more studies, as suggested by NECTA witness Dr. Johnson. It would not be reasonable to allocate to either telephony or video 100% of the common and joint costs because the system benefits both services. SNET has demonstrated to the Department's satisfaction that the joint system is potentially less costly for telephony customers, and therefore, it is not reasonable or necessary to require SNET to undertake additional studies before the Department determines a reasonable allocation of common and joint costs. Additionally, the Department is not convinced that SNET should be directed to cost its services as if they were being provided over a copper/fiber network. SNET is convinced that HFC is the most efficient way for it to proceed in developing its network. If this is in error, the Department encourages the CLECs to build and operate a less costly, more efficient network. SNET, on its own, with its own assessment of the risks and rewards, has decided to move to an HFC network. If the market does not hold SNET to its projected costs, the Department has every intention of doing so for SNET's telephony customers. The

Department will insure that video costs are not recovered from telephony customers now or in the future The Department finds a 50/50 sharing of common and joint costs to be reasonable. The Department will also continue to examine the so-called directly assigned costs of the HFC network to ensure against cross-subsidy.

Related to the fact that SNET is moving to a HFC network, is the parties' contention that copper/fiber should either be the system of choice or be maintained because CLECs want the availability of copper loops in the future. For example, MFS wants SNET to continue deploying copper loops so that it can provide its customers with high speed service using the ADSL and HDSL technology. The Department believes this issue is based on whether SNET should be required to maintain its network, and make network decisions based on its competitors' decisions, or based on SNET's operational decisions and fiduciary duty to its shareholders. The Department, consistent with the 1996 Federal Act and Public Act 94-83, believes that transition is the key, but not permanence. SNET will provide copper loops until its operational goals move the facilities to the HFC system and should provide CLECs with copper loops as long as it is technologically feasible. SNET shall also inform prospective users of copper loops of the availability of such and how long they will be useable. SNET has committed to offering copper loops in those cases where its feasible. Tr. 2/4/97, p. 536. The Department concurs and will not require SNET to provide copper loops where they no longer exist.

B. Proposed Rates

On July 8, 1996, SNET requested the Department approve rates and charges for its unbundled loops, ports and the associated interconnection arrangements. SNET based these revised rates on revised TSLRIC studies submitted on April 29, 1996. MacClintock Testimony, pp. 2 and 3. These requested rates reflect, in total, an overall 35% markup above the total of the submitted TSLRIC costs.

SNET contends that the efficient prices for services are those that contain a markup over incremental cost that: 1) recovers the revenue to which the firm is entitled; 2) distorts demand the least across the markets in which the firm competes; and 3) preserves competitive parity so that no firm is advantaged or disadvantaged because it supplies the facilities that its competitors require in competing for customers in the retail local exchange market. The 35% contribution provides a means for SNET to recover its joint and common costs.

At issue in the instant proceeding is how much rates for unbundled network elements should be permitted to exceed their respective costs for SNET to recover joint and common costs. SNET notes that the Department has addressed this issue as recently as its July 17, 1996 Decision in Docket No. 95-11-08. In that Decision the Department limited the contribution level to 15% for services it deemed to be essential, precluding the acceptance of anything less than 15%. July 17, 1996 Decision, Docket No. 95-11-08, p. 59.

The amount of contribution in SNET's rates has been a matter of great debate. The Department has set the amount of contribution for essential services it deems essential at 15% of TSLRIC. To date, the Department has only deemed E-911 Service, 900 Blocking Service and NXX Code Administration to be essential services. The Department has not been presented with any evidence in this proceeding that compels it to broaden the set of services it considers to be essential, and therefore, limited to the 15% contribution provision set forth in Docket No. 95-11-08.

Certain parties in this proceeding have expressed support for a low rate of contribution; SNET prefers a high rate, up to several hundred percent in some cases. SNET's historic contribution level averages 59%. That rate is not a good upper-bound because competition has produced limited price discipline as of this date and therefore no efficiency gains are reflected in that historical level of contribution. Additionally, the Department does not believe that the historical level reflects the incentive to lower these costs in a competitive environment. During this proceeding, no party produced any evidence on what an efficient level of contribution would be in the future. Since SNET has included 35% in most service rates, the Department will use this contribution level as a competitive surrogate. This average may yet be too high in a fully competitive environment. SNET indicates that a lower range of contribution of 25%, on average was the going forward level. Tr. 2/3/97, p. 91. Therefore, the Department will require SNET to submit a revised rate analysis assuming a 25% level of contribution, where the average will be based on projected revenue earned. The Department encourages SNET to undertake a study of its required contribution levels assuming a more competitive and more efficient market.

In its written exceptions, SNET objected to the 25% level of contribution and asserted that it needs to recover on average a 59% contribution from its services. In an attempt to comply with the intent of the Draft Decision, SNET proposed to conduct a common cost analysis of the level of contribution that its wholesale services would require to recover in a competitive environment. SNET also proposed to produce a preliminary analysis of its costs by September 1, 1997 and file the completed study by December 1997. SNET Written Exceptions, pp. 9 and 10; Tr. 4/16/97, p. 1574.

The Department will accept SNET's proposal to conduct a forward looking common cost analysis. SNET will be directed to submit its preliminary results to the Department no later than September 1, 1997, and be required to file the final results of this study no later than December 15, 1997. During the interim period between issuance of this Decision and completion of the Department's review of SNET's common cost studies, SNET will be permitted to recover the level of contribution as proposed in its July 8, 1996 filing.

In addition, all of the parties believe that SNET's non-recurring charges are too high and create an essentially insurmountable barrier to competitive entry, particularly if there is increasing customer churn. Tr. 2/7/97, p. 1137. MCI and AT&T also believe that normal churn will preclude the recovery of the initial nonrecurring charge. However, these carriers appear to not have taken into consideration the activation charges they are free under both state and federal rules to impose on their customers.

The Department's analysis of the cost studies and record finds that the nonrecurring charges are too high and have little credible support. The Department believes that SNET's nonrecurring charges are too high because it has included costs associated with complex loops when the loops will be primarily used for plain old telephone service. The Department does not believe that SNET's cost studies accurately reflect how the service should be provided. The Department finds that SNET's nonrecurring loop charge is a deterrent to the development of efficient competition and is not supportable by the evidentiary record. Review of the Company's cost studies indicates that the initial proposed DS0 costs are extremely high and with little support. When the Department removes the Special Service WORD costs, the remaining cost is still unreasonable because it includes inflated line connection costs. SNET assumed, without satisfactory support, that 100% of the time, a service technician would be dispatched while the record demonstrates that a technician is dispatched only 17% of the time. Tab 8, pages 29 and 128 of WRD-1; Tr. 2/4/97, pp. 496 and 497, and Tr. 2/24/97, p. 1478. Assuming a technician dispatch rate of 17%, the cost is reduced substantially for a total cost of approximately $65. SNET proposes a charge of $65 for existing customers, which is its current charge imposed on new business customers. SNET Brief, Attachment 2. Based on above, the Department can find no reason why these charges should be different. Therefore, the Department will establish a nonrecurring charge of $65 for POTS type loops. This charge is equal to the retail rate for all unbundled loop services, new or existing, until SNET produces a more reasonable study. For those loops requiring the complex process (e.g., ISDN and DS1), SNET will be permitted to impose approved nonrecurring charges for the same services currently found in its Connecticut Access Service Tariff.

The Department also takes exception to SNET's inclusion of the disconnect charge as an "up-front" item. SNET will be providing service to the CLECs on a continuing basis and accordingly, there will be little jeopardy involved in the collection of the disconnect charge at the time a loop is no longer needed by a CLEC. The Department finds that disconnection costs should be collected at the time of disconnection from the CLEC ordering the change in service.

Finally, MFSI disagrees with SNET's decision to offer only 250-pair cables. MFSI states that there are modular cable sizes available in the industry that would appropriately match the port configurations of MFSI's different sets of collocated equipment. MFSI claims that such modular cable sizes include 192, 384, 672, 1344 and 2688. MFSI contends that 250-pair cable matches none of its existing port configurations and SNET has not offered no rationale for restricting cross connection to 250-pair. Accordingly, MFSI requests the Department order SNET to expand the number of cable sizes available to CLECs purchasing cross connection. MFSI Brief, pp. 18 and 19.

In response, SNET claims that its standard cables have historically been designed for multiples of 250-pairs and has proposed a tariffed rate for a 250-voice grade pair cross connection between a CLEC's collocated space and SNET's distribution frame. While noting that the FTA does not require SNET to expand its cable size offering, SNET proposes, upon a Bona Fide Request, to evaluate alternative to its proposed 250-pair cable, with the price of such being based upon the actual cost incurred to provide the alternative pair cable. SNET Reply Brief, pp. 18 and 19.

The Department believes SNET's proposal to address MFSI's request for alternative cable sizes is reasonable and acceptable as proposed. The Department expects SNET to make every effort in addressing and satisfying MFSI's requirements during its evaluation process.

C. QUALITY OF SERVICE

MFSI proposes that SNET be directed to provide service intervals for installation and maintenance of unbundled loops at intervals equal to those received by SNET's retail customers. MFSI suggests that failure of SNET to meet a given interval for three or more consecutive months should result in a liquidated damages payment of $75,000 per month. SNET suggests that:

> In lieu of financial penalties, enforcement [of quality of service standards] should be similar to the more productive steps taken in the access area, in which meetings are held, results are reviewed, action plans are developed and rebates are provided for specific service problems.

Tr. 2/4/97, p. 547

The Department finds SNET's suggestion is unsatisfactory in a competitive environment. In the access area, SNET and the parties are generally not competing for the same customers. If SNET provided poor quality of service to an interexchange carrier, SNET did not receive a competitive advantage. That is not the case in the instant proceeding as SNET will be competing with other local service providers. Accordingly, SNET's proposal is hereby rejected.

The rates approved in this proceeding will also be subject to the price cap formula approved by the Department in Docket No. 95-03-01. As such, it is in SNET's best interests to maintain its network and not reduce the price cap's index relative to service quality. The Department believes that the penalties provided for pursuant to the price cap formula preclude the necessity for immediately adopting a scheme of financial penalties such as those proposed by MFSI at this time. The penalties provided for in the Decision in Docket No. 95-03-01 could reduce the Company's price cap index by as much as 2.0%. With a price cap index that begins with a measure of inflation as its basis, poor quality of service could, in theory, cause rate reductions that would exceed specific penalty amounts.

Quality of service standards must be maintained. However, the purpose of this proceeding is to establish unbundled element rates. The Department agrees with the parties that SNET's unbundled elements should be provided with or without complex testing capability. The Department concurs with SNET's proposal to charge separate rates with or without this testing equipment, but, as stated above, SNET has not based its rates on reasonable cost studies. The Department also does not believe that SNET's proposal goes far enough. Specifically, SNET should investigate ways that it can address CLEC unbundled loop testing in the same manner as SNET does for its own customers. The Department is convinced that treating CLEC loops in the same manner as special circuit is not appropriate or conducive to competition. Therefore, the Department will require SNET to limit the costs for CLECs to no more than the costs it imposes on its customers for normal loop testing. SNET should also revise its rates accordingly.

The Department also expects SNET to change the manner in which it establishes costs for testing facilities. First, SNET should find more efficient ways of offering quality service to CLECs. Unbundled loops are no longer a "special service," but a generic service. SNET should also develop, costs and rates without testing capability. Specifically, SNET should unbundle testing from the loop. Until these studies are completed, SNET will provide testing at the rates discussed above.

The Department agrees with AT&T that additional service standards may be required; however, the Department does not have a complete record on these issues, nor does any party have any experience determining what is necessary. The Department will continue to hold SNET to quality of service standards ordered in Docket No. 95-03-01. The Department will examine these issues in a separate docket after the CLECs and SNET have had some time to work together.

On April 15, 1997, SNET filed with the Department proposed wholesale service quality measurements, standards and financial remedies that would be applied to its resold services and unbundled elements. The Department has initiated Docket No. 97-04-23, The Southern New England Telephone Company's Proposed Service Standards and Financial Remedies for Resold Services and Unbundled Elements to investigate SNET's proposal. Pending the completion of the Department's investigation of SNET's proposal and issuance of a Final Decision in Docket No. 97-04-23, SNET will be required to maintain the quality of service standards ordered in Docket No. 95-03-01.

D. Conclusion

SNET will be directed to revise its recurring cost and rate studies. The Department hereby rejects SNET's nonrecurring cost study and will accept SNET's proposed $65 nonrecurring charge for unbundled loops, as proposed in Attachment 2 of its Brief. The amount of this charge will be imposed for all loops until such time has SNET has proposed, and the Department accepted, a reasonable cost study. The Department will also accept SNET's proposed recurring rates until SNET complies with the decreased level of contribution ordered herein. Once SNET has developed and the Department has approved the new recurring rates, SNET shall refund the difference. Lastly, the Department believes that SNET's recurring cost studies are reasonable and can be used to establish rates with a 25% level, on average, contribution.

VI. FINDINGS OF FACT

1. SNET's proposal to price its unbundled loops, ports, mulitplexing and interwire center transport comports with §251(d)(1) of the 1996 Federal Act and §16-247b of the Conn. Gen. Stat.

2. SNET has corrected the majority of TSLRIC studies' deficiencies identified by the Department in its December 20, 1995 Decision in Docket No. 95-06-17.

3. SNET's proposal to include 100% of its loop costs to the intrastate jurisdiction, because it will no longer impose the subscriber line charge for unbundled loops is acceptable.

4. SNET's separated service connection and disconnection costs are overstated.

5. SNET's nonrecurring cost study and resulting costs are unacceptable.

6. SNET has not accurately reflected all the expected cost savings from bulk provisioning.

7. SNET has provided a reasonable analysis of DLC's use and deployment.

8. SNET has provided sufficient supporting cost study documentation.

9. The 1996 Federal Telcom Act does not contain justification permitting SNET to impute pole attachment charges. The proper method of recovering pole attachment charges is to include these costs in the rate development and not through imputation.

10. The Hatfield Model does not provide a reasonable estimate of SNET's unbundled loop costs and is not useful in establishing rates for SNET's service.

11. SNET's planning horizon is reasonable and of sufficient length for rate making or competitive business planning.

12. LECOM does not reflect SNET's actual costs related to how it is growing its network, assumes the scorched node philosophy which has little application to the SNET network already in place.

13. The Hatfield Model is unacceptable for establishing rates for SNET's unbundled elements.

14. HFC benefits both telephony and video customers.

15. SNET has satisfactorily demonstrated that the joint telephone and video system is less costly for telephony customers.

16. SNET's proposal to share HFC joint and common on a 50/50 basis is reasonable.

17. SNET's proposed nonrecurring charges are too high because it has included costs associated with complex loops, when the loops will be primarily used for plain old telephone service, and, therefore, do not reflect how the service should be provided.

18. Disconnection costs should be collected at the time of disconnection from the CLEC ordering the change in service.

19. The rates and charges approved by this Decision will also be subject to the price cap formula approved by the Department in Docket No. 95-03-01.

VII. CONCLUSION AND ORDERS

A. CONCLUSION

SNET's TSLRIC cost study, with minor revisions submitted in support of its proposed rates is reasonable and should form the basis for its proposed rates and charges. SNET's request to offer unbundled loops, ports, multiplexing and inter-wire center transport for loops and ports, and voice grade cross-connects is hereby approved, subject to the orders below.

B. ORDERS

For the following Orders, please submit an original and 12 copies of the requested material identified by Docket Number, Title and Order Number to the Executive Secretary.

1. No later than May 1, 1997, SNET shall submit revised tariffs consistent with the Department's Decision discussed above.

2. No later than September 1, 1997, SNET shall submit to the Department a preliminary analysis of its common costs and file the final results of its common cost analysis with the Department no later than December 15, 1997.

3. SNET shall provide copper loops until its operational goals require movement of the facilities to the HFC system. SNET shall also inform prospective users of copper loops of the availability of such and how long they will be useable.

4. No later than October 1, 1997, SNET shall investigate and report back to the Department on the ways that it can address CLEC unbundled loop testing in the same manner as SNET currently performs for its own customers.

DOCKET NO. 96-09-22 DPUC INVESTIGATION INTO THE SOUTHERN NEW ENGLAND TELEPHONE UNBUNDLED LOOPS, PORTS AND ASSOCIATED INTERCONNECTION ARRANGEMENTS AND UNIVERSAL SERVICE FUND IN LIGHT OF THE TELECOMMUNICATIONS ACT OF 1996

This Decision is adopted by the following Commissioners:

Thomas M. Benedict

Janet Polinsky

Jack R. Goldberg

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Department of Public Utility Control, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.

Robert J. Murphy Executive Secretary Department of Public Utility Control	Date